

## OIB - P-3 Orion - WFF 05/12/19 Science Report

**Aircraft:** [P-3 Orion - WFF \(See full schedule\)](#)

**Date:** Sunday, May 12, 2019

**Mission:** OIB

**Mission Location:** Kangerlussuaq, Greenland

**Mission Summary:**

Mission: K – EGIG – Summit

Priority: Baseline

OIB completed the final baseline mission out of Kangerlussuaq: K – EGIG – Summit. The mission accomplishes several important tasks including extending coverage into the uppermost part of the Jakobshavn catchment with ICESat and ICESat-2 tracks and hitting the key validation Summit validation traverse site along ICESat track 412 and ICESat-2 track 879. Finally, we hit two major field surveys: the K-Transect within the Russell Glacier catchment and the EGIG line. For this campaign, the eastern portion of the EGIG line was shortened to accommodate for more ICESat-2 tracks near Summit and a single ICESat track was replaced with an ICESat-2 track in the upper Jakobshavn catchment. A total of six ICESat-2 tracks were flown, two of which were swapped (see notes below) to minimize the timing between OIB and IS-2 data collection (the attached map has been updated accordingly).

Due to a local event at the airport, we incurred a delayed takeoff with an expected arrival time after 6 PM. As a result, we were able to survey a portion of the Southwest Glaciers 01 mission over the Sukkertoppen Ice Cap just west of Kangerlussuaq in addition to the entire K-EGIG-Summit mission.

The flight was very smooth, although quite featureless, over the interior ICESat / ICESat-2 tracks. As expected, we encountered clear skies for nearly the entire route, including Summit, which had been fogged in for several days prior. Temperatures dropped a few degrees over the past few days, so many of the melt ponds developed a thin layer of ice on top. We noted evidence of surface meltwater pooling up to ~26 km inland of Russell Glacier and ~4100 feet in elevation.

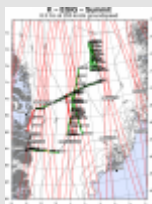
Headwall SWIR did not operate today, but otherwise all instruments worked well. ATM estimates 100% altimetry data recovery. We performed a ramp pass at 2500' prior to landing.

ICESat-2 Tracks (+/- indicates OIB surveyed after/before ICESat-2)

0681, - 8 hours (substitute)  
0879, - 13 days  
0437, + 16 days  
0749, - 5 days  
0246, + 28 days  
0727, - 3 days (substitute)

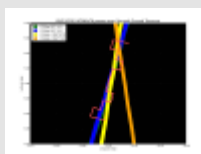
**Images:**

### Map of today's mission



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### Map of Summit Traverse location and today's ATM T6 passes over the



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## Three glaciers converge in a fjord off the Sukkertoppen Ice Cap



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## Steep, icy peaks along the southern edge of the Sukkertoppen Ice Cap



[Read more](#)

Submitted by: Brooke Medley on 05/23/19

Related Flight Report:

### P-3 Orion - WFF 05/12/19

**Flight Number:** 2019 OIB Science Flight #20

**Payload Configuration:** Operation IceBridge

**Nav Data Collected:** No

**Total Flight Time:** 9 hours

**Submitted by:** Mike Cropper on 05/13/19

**Flight Segments:**

<b>From:</b>	BGSF	<b>To:</b>	BGSF
<b>Start:</b>	05/12/19 11:45 Z	<b>Finish:</b>	05/12/19 20:45 Z
<b>Flight Time:</b>	9 hours		
<b>Log Number:</b>	<a href="#">19P017</a>	<b>PI:</b>	Joseph MacGregor
<b>Funding Source:</b>	Bruce Tagg - NASA - SMD - ESD Airborne Science Program		
<b>Purpose of Flight:</b>	Science		

**Flight Hour Summary:**

	<b>19P017</b>
<b>Flight Hours Approved in SOFRS</b>	250
<b>Total Used</b>	216.3
<b>Total Remaining</b>	33.7

#### 19P017 Flight Reports

Date	Flt #	Purpose of Flight	Duration	Running Total	Hours Remaining	Miles Flown
<a href="#">03/26/19</a>	#2053: 2019 OIB ATF	Check	0.9	0.9	249.1	0
<a href="#">03/27/19</a>	#2059: 2019 OIB PTF-Laser	Check	2.3	3.2	246.8	0
<a href="#">03/28/19</a>	#2061: 2019 OIB PTF-Radar	Check	3.2	6.4	243.6	0

<a href="#">04/01/19</a>	#2068: 2019 OIB WFF-BGTLTransit Flight	Transit	6.9	13.3	236.7	2458
<a href="#">04/03/19</a>	#2070: 2019 OIB Science Flight #1	Science	7.6	20.9	229.1	1938
<a href="#">04/05/19</a>	#2072: 2019 OIB Science Flight #2	Science	7.7	28.6	221.4	1910
<a href="#">04/06/19</a>	#2073: 2019 OIB Science Flight #3	Science	7.2	35.8	214.2	2000
<a href="#">04/08/19</a>	#2075: 2019 OIB Science Flight #4	Science	6.9	42.7	207.3	1780
<a href="#">04/09/19</a>	#2076: 2019 OIB Science Flight #5	Science	7.8	50.5	199.5	2045
<a href="#">04/10/19</a>	#2081: 2019 OIB Science Flight #6	Science	10.1	60.6	189.4	2702
<a href="#">04/11/19</a>	#2082: BGSF- BGTL Transit	Transit	2.2	62.8	187.2	696
<a href="#">04/12/19</a>	#2083: 2019 OIB Science Flight #7	Science	7.2	70	180	2109
<a href="#">04/15/19</a>	#2086: 2019 OIB Science Flight #8	Science	4.8	74.8	175.2	1243
<a href="#">04/16/19</a>	#2087: 2019 OIB Science Flight #9	Science	7.6	82.4	167.6	2036
<a href="#">04/17/19</a>	#2088: 2019 OIB Science Flight #10	Science	7.7	90.1	159.9	1937
<a href="#">04/18/19</a>	#2090: 2019 OIB Science Flight #11	Science	7.8	97.9	152.1	2008
<a href="#">04/19/19</a>	#2091: 2019 OIB Science Flight #12	Science	7.6	105.5	144.5	2104
<a href="#">04/20/19</a>	#2092: 2019 OIB Science Flight #13	Science	6.9	112.4	137.6	0
<a href="#">04/22/19</a>	#2094: 2019 OIB Science Flight #14	Science	6.6	119	131	1867
<a href="#">04/23/19</a>	#2099: 2019 OIB Science Flight #15	Science	7.7	126.7	123.3	1979
<a href="#">04/25/19</a>	#2102: 2019 OIB BGTL-KBGR Transit Flight	Transit	6.2	132.9	117.1	0
<a href="#">04/26/19</a>	KBGR to BGSF Transit	Transit	5.7	138.6	111.4	0
<a href="#">05/05/19</a>	2019 OIB Science Flight #16	Science	7.8	146.4	103.6	0
<a href="#">05/06/19</a>	2019 OIB Science Flight #17	Science	8.4	154.8	95.2	0
<a href="#">05/07/19</a>	2019 OIB Science Flight #18	Science	8.5	163.3	86.7	0
<a href="#">05/08/19</a>	2019 OIB Science Flight #19	Science	8	171.3	78.7	0
<a href="#">05/12/19</a>	2019 OIB Science Flight #20	Science	9	180.3	69.7	0
<a href="#">05/13/19</a>	2019 OIB Science Flight #21	Science	7	187.3	62.7	0
<a href="#">05/14/19</a>	2019 OIB Science Flight #22	Science	7.9	195.2	54.8	0
<a href="#">05/15/19</a>	2019 OIB Science Flight #23	Science	8.3	203.5	46.5	0
<a href="#">05/16/19</a>	2019 OIB Science Flight #24	Science	6.3	209.8	40.2	0

<a href="#">05/17/19</a>	2019 OIB Transit	Transit	6.2	216	34	0
<a href="#">05/17/19</a>	2019 OIB Transit	Transit	0.3	216.3	33.7	0

*Flight Reports began being entered into this system as of 2012 flights. If there were flights flown under an earlier log number the flight reports are not available online.*

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